

B1
introduction of impurities, formation of electrodes and wiring, and formation of an insulating film so as to form a transistor,

SiH
wherein the heat-treatment of the oxide film is carried out after removal of an oxidation-preventing film, and the thermal oxidation is carried out at least in an atmosphere of a gaseous mixture of hydrogen and oxygen or in an atmosphere of H₂O.

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17. (Amended) A process according to claim 15, wherein the oxide film is kept in a bare state during the heat-treatment for stress relaxation.

Please add the following new Claims 18 - 27:

sub 1
--18. A process for producing a semiconductor device, which comprises the steps of:
oxidizing a main surface of a silicon substrate, *pad*
forming an oxidation-preventing film on portions of the oxidized silicon substrate,
removing a part of the oxidation-preventing film that is located in an element-separating area,

forming an element-separating oxide film on the silicon substrate in the element-separating area *new matter* after removing at least another part of the oxidation-preventing film,

B3 *gate oxide* forming a thermal oxide film on the silicon substrate by oxidizing the silicon substrate, and

after forming the thermal oxide film, carrying out a heat-treatment at a temperature of 800° C or higher in an inert atmosphere, and

which further comprises forming a gate oxide film over the heat-treated silicon substrate.

✓ 19. A process according to claim 18, wherein the heat-treatment is carried out in an atmosphere of an inert gas selected from nitrogen, hydrogen and argon, or a gaseous mixture of these gases, said gas or gaseous mixture being able to contain 5% or less of oxygen.

✓ 20. A process according to claim 18, wherein the oxide film is kept in a bare state during the heat-treatment for stress relaxation.

✓ 21. A process according to claim 18, wherein the formation of the thermal oxide film is carried out at least in an atmosphere of a gaseous mixture of hydrogen and oxygen or in an atmosphere of H_2O .

✓ 22. A process according to claim 18, wherein the heat-treatment is carried out for relaxation of stress in the thermal oxide film.

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rule 2 →

~~23. A process for producing a semiconductor device, which comprises the steps of:
oxidizing a main surface of a silicon substrate,
forming an oxidation-preventing film on portions of the oxidized silicon substrate,
removing a part of the oxidation-preventing film that is located in an element-separating area,
forming an element-separating oxide film on the silicon substrate in the element-separating area after removing at least another part of the oxidation-preventing film,
forming a thermal oxide film on the silicon substrate by oxidizing the silicon substrate,
forming a gate electrode film on the thermal oxide film, and
after forming the gate electrode film, carrying out a heat-treatment at a temperature of 800°C or higher in an inert atmosphere.~~

24. A process according to claim 23, wherein the heat-treatment is carried out in an atmosphere of an inert gas selected from nitrogen, hydrogen and argon, or a gaseous mixture of these gases, said gas or gaseous mixture being able to contain 5% or less of oxygen.

25. A process according to claim 23, wherein the oxide film is kept in a bare state during the heat treatment for stress relaxation.

26. A process according to claim 23, wherein the formation of the thermal oxide film is carried out at least in an atmosphere of a gaseous mixture of hydrogen and oxygen or in an atmosphere of H₂O.

27. A process according to claim 23, wherein the heat-treatment is carried out for relaxation of stress in the gate electrode film.--
